

Chronic Disease Indicators: Indicator Definition



Cerebrovascular disease (Stroke), mortality

Category:	Cardiovascular Disease
Demographic Group:	All resident persons.
Numerator:	Deaths with International Classification of Diseases (ICD)-10 codes I60–I69 (ICD-9 code 430–438) as the underlying cause of death among residents during a calendar year.
Denominator:	Midyear resident population for the same calendar year.
Measures of Frequency:	Annual number of deaths. Annual mortality rate — crude and age-adjusted (standardized by the direct method to the year 2000 standard U.S. population, distribution 1*) — with 95% confidence interval.
Time Period of Case Definition:	Calendar year.
Background:	During 2000, stroke was the third leading cause of death in the United States, accounting for approximately 167,700 deaths. Historically, the southeastern United States has experienced high stroke death rates.
Significance :	Modifiable risk factors for stroke include behaviors (e.g., tobacco use, physical inactivity, and improper nutrition) and health status (e.g., untreated hypertension, hyperlipidemia, overweight, or diabetes). Approximately 26% of stroke deaths in the United States are attributable to high blood pressure, and 12% to smoking. Substantial differences in risk and preventive factors exist by race, age, sex, place of residence, and other demographic factors.
Limitations of Indicator:	Although the two major types of stroke — hemorrhagic (approximately 10% of stroke) and ischemic (approximately 65% of stroke) — share certain risk factors, their treatment varies. Consequently, accurate interpretation of trends or patterns in total mortality from cerebrovascular disease is difficult. Because cerebrovascular disease has a long latency period, years might pass before changes in behavior or clinical practice patterns affect cerebrovascular disease mortality.
Data Resources:	Death certificate data from vital statistics agencies (numerator) and population estimates from the U.S. Bureau of the Census or suitable alternative (denominator). http://wonder.cdc.gov
Limitations of Data Resources:	Causes of death and other variables listed on the death certificate might be inaccurate.
Healthy People 2010 Objectives:	12-7: Reduce stroke deaths.

* See Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. Hyattsville, MD: US Department of Health and Human Services, CDC, National Center for Health Statistics, 2001. Healthy people 2010 statistical notes, no. 20. <http://www.cdc.gov/nchs/data/statnt/statnt20.pdf>